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THE REINDEER HERDS OF THE PRIBILOF ISLANDS

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THE domesticated reindeer of Siberia were first introduced into Alaska in 1892 through the efforts of the missionary, Rev. Sheldon Jackson. The total number brought across Bering Sea was but few more than a thousand when the Russian Government prohibited further exportation. This nucleus has grown enormously and has been divided into a large number of separate herds. The success of the enterprise is apparently assured for many generations and the native race of Esquimos was probably saved from extermination through this single stroke of philanthropy. The people not only derive food and clothing from the herds, but the meat has been sold in ports as distant as Seattle and San Francisco. Nothing but a brilliant future can be foreseen for the industry at this time.

Most of the Alaska herds have been divided and subdivided to such an extent, and the records are so scattered through govern-



Photograph by Dr. L. H. French.

FIG. 1. SIBERIAN REINDEER HERD NEAR NUSHAGAK BAY, ALASKA.

ment reports, that it is difficult to secure data on rates of increase. This, however, is a matter of no little interest in science as well as in industry. It so happens that there are two independent herds on the Pribilof, or Fur Seal Islands, which furnish records of considerable value in this respect.

Through the efforts of Dr. Barton Warren Evermann, when chief of the Alaska Fisheries Service, herds were started on St. Paul and St. George Islands in 1911. The beginning was made with 25 and 15 deer, respectively, and each year a census has been made. The animals practically run wild so that a count of the sexes separately has proved impracticable, but the total numbers are very trustworthy. The counts as published each year in the reports of the Alaska Fisheries are shown in the following table:

CENSUS RECORDS OF PRIBILOF ISLANDS REINDEER HERDS		
Year	St. Paul Island	St. George Island
1911.....	25	15
1912.....	40	25
1913.....	52	36
1914.....	75	58
1915.....	92	62
1916.....	111	85
1917.....	144	96
1918.....	155	114
1919.....	164	123
1920.....	192	125
1921.....	250	160

It is shown in the above table that the original herd of 25 deer on St. Paul Island has increased to 250. In addition to these an even hundred have been killed for food. On the smaller island of St. George the original herd of 15 has increased to 160 and 89 have been killed for food. The records of killings date from 1915 and are as follows:

REINDEER KILLED FOR FOOD ON THE PRIBILOF ISLANDS		
Year	St. Paul Island	St. George Island
1915.....	3	
1916.....	6	3
1917.....	9	6
1918.....	12	8
1919.....	14	22
1920.....	22	31
1921.....	34	19
Total.....	100	89

Thus the total strength of the two herds in 1921 was 350 for St. Paul Island and 249 for St. George Island. When we consider that the animals have had no care whatsoever that reindeer need,



Photograph by Dr. L. H. French.

FIG. 2. FEMALE AND YOUNG OF SIBERIAN REINDEER NEAR NUSHAGAK BAY, ALASKA

the condition would seem to be very satisfactory and Dr. Evermann deserves great commendation for having overcome the many obstacles in the way when the introduction was made in 1911. Persons familiar with the raising of these animals in Norway state that in 10 years the original herds of 25 and 15 should have increased to 500 and 300 respectively, if they had received proper care and attention and if the surplus males had been regularly removed. A much larger number could also have been taken for food. Nevertheless, the records possess a peculiar interest because the herds have been allowed to revert to the wild state.

The average increase each year has been a little more than $33 \frac{1}{3}$ per cent. when the animals killed are added to those living. It is a little less than that figure when only those living are considered.

The full significance of this may be better understood if comparison be made with other animals which bring forth but one young each year, such as the fur seals, for which the Pribilof Islands are famous. In the same ten years the herd of these animals has increased at an average rate of only about eight per cent. per year. The difference in the rate is not due to the longer breeding period of the reindeer, but to the enormous destruction of the fur seals in the sea by killer whales. At least fifty per cent. of the young born each year fail to reappear the third year following, and the work can be laid only to the killer, because the actual amount of pelagic sealing by man is small.

As stated above, the reindeer have reverted to the wild state. The business of the inhabitants is the taking of seal and fox skins and they give little attention to the deer. The animals are never herded or placed in corrals. They resort to the distant parts of the islands where they seldom see human beings and have become almost as wary as wild caribou. No use is made of them at all except for food.

Some of the surplus males are now taken each winter and the herds show considerable improvement since the practice was started in 1915, as a careful examination of the above tables will demonstrate. Before that time the fighting of the males was a detriment to the herd in several ways. They not only killed or injured each other, but they injured some of the females as well.

The killing is done with high powered rifles, not a commendable practice, but the only practicable method when the animals are allowed to become so wild. The shooting not only makes them



FIG. 3. ST. PAUL ISLAND REINDEER HERD IN 1919

wilder, but results in the occasional killing of a first class female by mistake. In one case one male and two females were killed with one shot fired into the herd.

As to the already great value of the herds to the U. S. Bureau of Fisheries, which administers the affairs of the islands, there can be no question. Each deer killed is equal in food value to two sheep which are imported at about \$15 per head on the average. Thus the equivalent of about 100 sheep was taken in 1921. The value of this food would seem to warrant the employment of capable herders and the erection of proper corrals for the care of the animals. This would not only enable the removal of the correct number of males without the uncertain method of shooting, but would enable the authorities to remove old and useless females, as any wide-awake stockman would do.

If the herds continue to increase during the next ten years as they have in the past ten, there should be about 2,500 deer on St. Paul Island in 1931 and about 1,600 on St. George. So large prospective numbers as these should receive care and attention, because the annual increment will furnish a supply of excellent

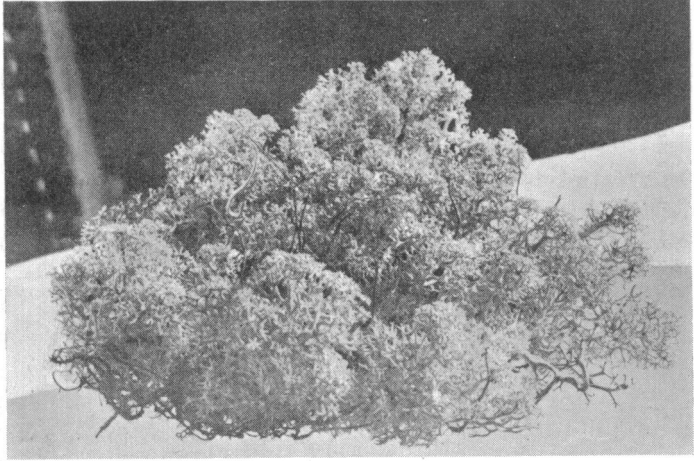


FIG. 4. LICHENS KNOWN AS "REINDEER MOSS" FROM ST. PAUL ISLAND, ALASKA

fresh meat, sufficient to supply all the needs of the islands for many decades.

Since the reindeer depend upon slow growing lichens, the familiar reindeer "moss," for food in winter, care should be taken that the herds do not increase beyond the supplies of these plants. The islands are small and not all of the surfaces are suitable for grazing by any means. It has been stated that this "moss" on the mainland of Alaska replaces itself in about seven years. Observations made by me on the Pribilofs indicate that there it grows more rapidly. Areas completely denuded in 1914 were regrown by 1919. The difference in rate of growth is believed to be due to the longer growing season on the Pribilofs and the much damper climate.

One of the most important problems to be solved in connection with the Pribilof herds is the determination of the maximum numbers which can be supported. The government should determine this before it is too late. With competent herders in charge of the animals it would not be a difficult undertaking.

These herds are under particularly fine circumstances for observation and study. The most distant part of either island can be easily reached in a day by a man on foot. Strict control is constantly maintained by the agents of the government; or at any rate it can be maintained when desired. More is known of the wild life of the reservation than of any similar area in our northern territory. It would seem that here is the place to maintain model reindeer herds and to determine many of the needed facts for the propagation of these animals on a large scale. At no other place are conditions so favorable. The animals have no enemies

on the islands. Dogs are not permitted to be landed and mosquitoes or other injurious insects are absent. By some queer but fortunate turn of fate, ticks or parasitic flies were not imported with the original shipment. No new stock has been brought in, so that inbreeding and crossing could here be studied to the greatest advantage.

It may be of interest to those who so vigorously opposed the introduction of the animals in 1911, and actually prevented it

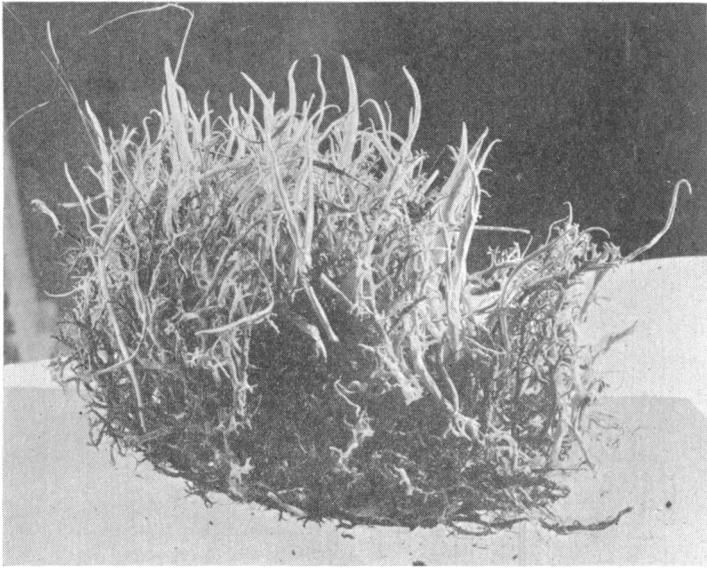


FIG. 5. LICHENS KNOWN AS "REINDEER MOSS," OTHER SPECIES, FROM ST. PAUL ISLAND, ALASKA

when first proposed by Ezra W. Clark back in 1905, to learn that the reindeer have not interfered in the slightest degree with the fur seal herds or with the work of securing their skins. The deer seldom visit the beaches and have not to my knowledge been observed on a fur seal rookery when it was occupied.

It is to be hoped that the Bureau of Fisheries will grasp the opportunity presented, and by careful study and care of its reindeer herds, furnish the people of Alaska with information which will be of inestimable value in the industrial development of the north.